



Application Serial No.: 09/986,909
Reply to Office Action dated June 28, 2006

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) An image pickup apparatus comprising:

a first connector arranged on a wiring board;

a second connector including an optical lens and being engageable with the first connector;

a photoelectric conversion module including a photoelectric conversion element which has an electrode located on an optical lens side and on which light from the optical lens is incident, said photoelectric conversion module being fixedly held when the photoelectric conversion module is clamped by the first and second connectors in a state where the first and second connectors are in engagement and coupled relatively to each other;

[[a]] positioning ~~member~~ members that have at least two different shapes determining relative positions of the first connector, second connector and photoelectric conversion module; and

a spring electrode electrically connected to a terminal of the photoelectric conversion module and located at a position where the first connector is in contact with the photoelectric conversion module, said spring electrode being electrically connected to the wiring board.

2. (Previously Presented) An image pickup apparatus according to claim 1, wherein said photoelectric conversion module comprises:

a second wiring board including an opening;

the photoelectric conversion element provided for one major surface of the wiring board and including a photoelectric conversion surface that opposes the opening; and

a transparent member provided for another major surface of the wiring board and covering both the opening and the photoelectric conversion surface,

3. (Canceled)

4. (Original) An image pickup apparatus according to claim 1, wherein said second connector includes a lens barrel.

5. (Original) An image pickup apparatus according to claim 1, wherein said second connector includes a lens barrel, and said lens barrel has at least one opening which opposes the optical lens and which is provided with a diaphragm.

6. (Original) An image pickup apparatus according to claim 1, wherein said first connector includes a guide which guides the second connector to a predetermined position.

7. (Original) An image pickup apparatus according to claim 1, wherein said first connector includes an elastic member which urges the second connector toward the first connector when the first and second connectors are brought into engagement and coupled relatively to each other.

8. (Currently Amended) A method for manufacturing an image pickup apparatus, comprising:

an installation step of arranging a first connector and an electronic component on a wiring board and electrically connecting the first connector and the electronic component together; and

an assembly step performed when the first connector and a second connector are brought into engagement and including:

inserting a photoelectric conversion module, including a photoelectric conversion

element which has an electrode located on an optical lens side and on which light from the optical lens of the second connector is incident, between the first connector and the second connector;

determining relative positions of the first connector, second connector and photoelectric conversion module by ~~[[a]]~~ positioning ~~member~~ members that have at least two different shapes; and

electrically connecting a spring electrode located at a position where the first connector is in contact with the photoelectric conversion module to a terminal of the photoelectric conversion module.

9. (Original) A portable electric apparatus comprising the image pickup apparatus defined in claim 1.

10. (Currently Amended) An image pickup apparatus according to claim 1, wherein said positioning ~~member is a pin~~ members are pins connected to said second connector, and wherein said first connector has ~~[[an]]~~ opening ~~part~~ parts configured to receive said ~~pin~~ pins.

11. (Currently Amended) An image pickup apparatus according to claim 10, wherein said photoelectric conversion module has ~~a hole~~ holes configured to allow passage of said ~~pin~~ pins therethrough.

12. (Currently Amended) A method of manufacturing an image pickup apparatus according to claim 8, wherein said positioning ~~member is a pin~~ members are pins connected to said second connector, and wherein said first connector has ~~[[an]]~~ opening ~~part~~ parts configured to receive said ~~pin~~ pins.

13. (Currently Amended) A method of manufacturing an image pickup apparatus

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according to claim 12, wherein said photoelectric conversion module has ~~a hole~~ holes
configured to allow passage of said ~~pin~~ pins therethrough.